In the Claims:

1.   (Currently amended) A method, comprising:

mirroring data from a primary storage device at a first location to a secondary storage device at a second location;

taking a snapshot of the primary storage device and of the secondary storage device;

storing the primary storage device snapshot on a first snapshot volume at the first location;

storing the secondary storage device snapshot on a second snapshot volume at the second location; and

updating a data structure in a remote host system to record backup times for the first and second snapshots and to record locations of the snapshots on the snapshot volumes.

2.   (Original) The method of claim 1, further comprising repeating the mirroring, taking, storing the primary storage device snapshot, storing the secondary storage device snapshot, and updating so as to store multiple generations of snapshots.

3.   (Original) The method of claim 2, further comprising:

selecting a snapshot to use to restore data to the primary storage device;

determining if the selected snapshot is stored at the first location;

if the selected snapshot is stored at the first location, restoring data to the primary storage device using the selected snapshot generation at the first location;

if the selected snapshot is not stored at the first location, synchronizing the secondary storage device with the selected snapshot generation at the second location and then restoring data to the primary storage device using data from the synchronized secondary storage device.

4.   (Original) The method of claim 1, wherein the taking of snapshots of the primary and secondary storage devices is done simultaneously.

5.   (Original) The method of claim 3, wherein the selecting selects the most recently created snapshot.

6.   (Currently amended) ~~The method of claim 3,~~ A method, comprising:

mirroring data from a primary storage device at a first location to a secondary storage device at a second location;

taking a snapshot of the primary storage device and of the secondary storage device;

storing the primary storage device snapshot on a first snapshot volume at the first location;

storing the secondary storage device snapshot on a second snapshot volume at the second location;

updating a data structure to record backup times for the first and second snapshots and to record locations of the snapshots on the snapshot volumes;

repeating the mirroring, taking, storing the primary storage device snapshot, storing the secondary storage device snapshot, and updating so as to store multiple generations of snapshots;

selecting a snapshot to use to restore data to the primary storage device;

determining if the selected snapshot is stored at the first location;

if the selected snapshot is stored at the first location, restoring data to the primary storage device using the selected snapshot generation at the first location;

if the selected snapshot is not stored at the first location, synchronizing the secondary storage device with the selected snapshot generation at the second location and then restoring data to the primary storage device using data from the synchronized secondary storage device;

wherein the selecting selects a snapshot based on a user preference.

7.   (Original) The method of claim 2, further comprising deleting the oldest snapshot at the first location and deleting the oldest snapshot at the second location.

8.   (Original) The method of claim 1, further comprising determining if the secondary storage device is solid state before taking a snapshot of the secondary storage device.

9.   (Currently amended) A computer-readable storage medium storing program code for causing a computer to perform the steps of:

mirroring data from a primary storage device at a first location to a secondary storage device at a second location;

taking a snapshot of the primary storage device and of the secondary storage device;

storing the primary storage device snapshot on a first snapshot volume at the first location;

storing the secondary storage device snapshot on a second snapshot volume at the second location; and

updating a data structure on a remote host system to record backup times for the first and second snapshots and to record locations of the snapshots on the snapshot volumes.

10.   (Original) The computer-readable storage medium of claim 9, further comprising program code to cause the computer to repeat the mirroring, taking, storing the primary storage device snapshot, storing the secondary storage device snapshot, and updating steps so as to store multiple generations of snapshots.

11.   (Original) The computer-readable storage medium of claim 10, further comprising program code to cause the computer to perform the steps of:

selecting a snapshot to use to restore data to the primary storage device;

determining if the selected snapshot is stored at the first location;

if the selected snapshot is stored at the first location, restoring data to the primary storage device using the selected snapshot generation at the first location;

if the selected snapshot is not stored at the first location, synchronizing the secondary storage device with the selected snapshot generation at the second location and then restoring data to the primary storage device using data from the synchronized secondary storage device.

12.   (Original) The computer-readable storage medium of claim 9, wherein the taking of snapshots of the primary and secondary storage devices is done simultaneously.

13.   (Original) The computer-readable storage medium of claim 11, wherein the selecting selects the most recently created snapshot.

14.   (Currently amended) ~~The computer-readable storage medium of claim 11,~~ A computer-readable storage medium storing program code for causing a computer to perform the steps of:

mirroring data from a primary storage device at a first location to a secondary storage device at a second location;

taking a snapshot of the primary storage device and of the secondary storage device;

storing the primary storage device snapshot on a first snapshot volume at the first location;

storing the secondary storage device snapshot on a second snapshot volume at the second location;

updating a data structure to record backup times for the first and second snapshots and to record locations of the snapshots on the snapshot volumes;

repeating the mirroring, taking, storing the primary storage device snapshot, storing the secondary storage device snapshot, and updating steps so as to store multiple generations of snapshots;

selecting a snapshot to use to restore data to the primary storage device;

determining if the selected snapshot is stored at the first location;

if the selected snapshot is stored at the first location, restoring data to the primary storage device using the selected snapshot generation at the first location;

if the selected snapshot is not stored at the first location, synchronizing the secondary storage device with the selected snapshot generation at the second location and then restoring data to the primary storage device using data from the synchronized secondary storage device;

wherein the selecting selects a snapshot based on a user preference.

15.   (Original) The computer-readable storage medium of claim 10, further comprising program code to cause a computer to delete the oldest snapshot at the first location and delete the oldest snapshot at the second location.

16.   (Original) The computer-readable storage medium of claim 9, further comprising program code to cause the computer to determine if the secondary storage device is solid state before taking a snapshot of the secondary storage device.

17.   (Currently amended) A system, comprising:

    means for mirroring data from a primary storage device at a first location to a secondary storage device at a second location;

    means for taking a snapshot of the primary storage device and of the secondary storage device;

    means for storing the primary storage device snapshot on a first snapshot volume at the first location;

    means for storing the secondary storage device snapshot on a second snapshot volume at the second location; and

    means for updating a data structure in a remote host system to record backup times for the first and second snapshots and to record locations of the snapshots on the snapshot volumes.

18.   (Original) The system of claim 17, further comprising means for repeating the means for mirroring, means for taking, means for storing the primary storage device snapshot, means for storing the secondary storage device snapshot, and means for updating so as to store multiple generations of snapshots.

19.   (Original) The system of claim 18, further comprising:

    means for selecting a snapshot to use to restore data to the primary storage device;

    means for determining if the selected snapshot is stored at the first location;

    means for restoring data to the primary storage device using the selected snapshot generation at the first location when the selected snapshot is stored at the first location;

    means for synchronizing the secondary storage device with the selected snapshot generation at the second location and then restoring data to the primary storage device using data from the synchronized secondary storage device when the selected snapshot is not stored at the first location.

20. (Original) A method of backing up a first logical volume in a first storage subsystem to a second storage subsystem connected to the first storage subsystem via a path, the method comprising the steps of:

 providing a second logical volume, a third logical volume, and a fourth logical volume in the second storage subsystem, the second logical volume being a copied logical volume of the first logical volume, the first and second logical volumes being in synch state, the third and fourth logical volumes being copied logical volumes of the second logical volumes, the second, the third and the fourth logical volumes being in synch state, and

 splitting the second logical volume from the first logical volume,

 splitting the third logical volume from the second logical volume,

 synchronizing the second logical volume with the first logical volume,

 splitting the second logical volume from the first logical volume,

 splitting the fourth logical volume from the second logical volume, and

 synchronizing the second logical volume with the first logical volume.

Please add the following new claims:

21. (New) A storage system, comprising;

 a local storage system including a local volume and at least one local snapshot volume;

 a remote storage system including a remote volume and at least one remote snapshot volume, said remote storage system coupled to said local storage system via a network connection; and

 a host computer; wherein

 said local storage system mirrors data in said local volume to said remote volume in said remote storage system, and takes a snapshot of said local volume to said at least one local snapshot volume;

 said remote storage system takes a snapshot of said remote volume to said at least one remote snapshot volume; and

said host computer stores a data structure to record backup times for the local and remote snapshot volume and to record the location of said snapshot volumes.

22.   (New) A storage method, comprising;

providing a local storage system including a local volume and at least one local snapshot volume;

providing a remote storage system including a remote volume and at least one remote snapshot volume, said remote storage system coupled to said local storage system via a network connection; and wherein

mirroring data in said local volume to said remote volume in said remote storage system by the local storage system;

taking a snapshot of said local volume to said at least one local snapshot volume by said local storage system;

taking a snapshot of said remote volume to said at least one remote snapshot volume by said remote storage system; and

storing in a host computer a data structure to record backup times for the local and remote snapshot volume and to record the location of said snapshot volumes.